

*L. Publicola present*

# REFLECTIONS

ON THE  
GENERAL UTILITY  
OF  
INLAND NAVIGATION

TO THE  
*Commercial and landed Interests of England;*

WITH  
OBSERVATIONS

ON THE  
Intended CANAL from BIRMINGHAM to WORCESTER,

AND SOME  
Strictures upon the Opposition given to it

*By the PROPRIETORS of the*  
STAFFORDSHIRE CANAL.

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RECOLLECTIONS

OF THE

GENERAL EXHIBITION

OF

INDUSTRIAL NAVIGATION



OBSERVATIONS

ON THE

NAVIGATION OF THE GREAT OCEAN

AND THE

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## REFLECTIONS, &c.

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THE construction of Canals, and the principles upon which acts of legislature authorising these public works should depend, are extremely simple, and cannot be too generally understood.

The general utility resulting from cheap and easy communication, conveying the materials of manufacture and the product of the lands, it is needless to urge. The numerous acts which have passed the legislature, for the purpose of constructing canals, attest the judgment of parliament on this subject; while an improved cultivation of the soil, and increased manufactures where these works have been executed, evince the wise policy of extending to such undertakings the national protection and support.

Assuming, therefore, that no national interest prohibits the assent of parliament, the peculiar propriety of each individual attempt seems to be a subject of *local interest*, which the proprietors of lands and manufactures, within the reach of its benefits, have a right to decide for themselves. Unquestionably the proprietors of the soil, through which a road or canal is intended to pass, if perfectly unanimous,



have a *legal right* to construct the communication, and to demand what tolls they please; because every man may freely exercise a dominion over his own soil; and no other man has a right to use a new passage without his consent. But as no extensive work, however generally desired, could be executed without interruption, from the perverseness of some individuals, or the inability of others to contract, (where the estate belongs to a minor, or is fettered by family settlements), the intervention of parliament becomes necessary. The authority of the legislature compels a sale, securing a liberal compensation by the same means which protect all our rights, the decision of a jury, where the parties cannot agree; and engraft on this concession—a *stipulated right of passage for the public for a moderate toll.*

An application, therefore, for Legislative Authority becomes absolutely necessary; and when it is considered, that a seat in parliament confers a solemn trust to be executed for the benefit of the public, it is difficult to believe, that an application made by the principal land-owners of a county, and supported by the neighbouring manufacturers, can fail of success in the present parliament of Great-Britain: Although it may have unfortunately happened on former occasions, that motives have prevailed, out of the line of public duty, to determine the fate of  
bill



bills depending in parliament. An examination of the arguments which have been employed to defend the refusal of parliamentary sanction to the late application from the county of Worcester, becomes necessary upon the present occasion.

That all the principal land-owners solicited the bill—that the manufacturers of Birmingham desired it—that the cities of Worcester, Gloucester, Bristol, with all the principal towns on the Severn and adjoining coast, from *experience* of the present imperfect navigation, concurred—were facts too evident to be denied; and to an unprejudiced mind attest the peculiar utility of the plan, beyond all evidence in detail. The arguments which the opponents were compelled to employ, were singular in their nature, at variance with each other, and such as the opposers of this bill did not themselves believe to have any real foundation in truth.

They affected an anxious concern for the interests of the subscribers, as if it were possible to persuade any man that the proprietors of the Staffordshire canal, *the real opponents*\*, had brought witnesses at a great

\* It is a truth worth remarking, that every opposition this Plan has met with, under whatever form it has appeared, has been traced up to the Staffordshire Canal Company, who have liberally paid all the expences attending it.

great expence, to protect the subscribers against themselves, or to resist an undertaking which, according to their reasoning, must be defeated by its own inherent absurdity.

They pretend that the proposed plan is impracticable.

The extreme facility of its execution to the extent of 16 miles from the town of Birmingham, must be admitted, as it passes upon a level; and the rains of heaven, independent of springs which in digging must be opened, would afford an abundant supply of water. Through the remainder of the intended line, in a fall of 448 feet, the waste of water by the locks was to be supplied by fire engines from the river Severn. The expence of raising a lock full of water to the greatest height is a subject of correct calculation in the present improved state of mechanics; and admitting no other supply (which is very far beyond the truth) the charge will form a small proportion of the lowest toll ever established by parliament. Demonstrable, however, as is this part of the subject, it does not rest on calculation: The experiment has been tried with success. The Birmingham canal has been supplied by raising water from a great depth; and we  
all

all know, that the fire engine has received an improvement that nearly trebles its force, with the same expenditure of coals.

The waste of water from the river Severn has been ridiculously stated by those who practise the same mode of supply above the shoals at Stourport. What the waste of water is, that raised to a given height, continually returns through the locks, with what is accumulated along the lines, with every barge to the Severn again, will require an acute arithmetician to compute.

We are told it will not be profitable to the subscribers. To assure these kind friends that the subscribers are all adults perfectly capable to judge of their own interests, seems a satisfactory answer. But this argument has no credit with its authors. The profit must depend on its extensive utility (for no man is compelled to navigate) and if our opponents did not concur with us in opinion of its utility and consequent traffic, they would not apprehend a diminution of their own exorbitant gains ; and would cease to oppose.

The interest of the public is apparent. Competition secures a passage, easy, commodious, and cheap.

Admit



Admit for a moment the assertion were true, that the undertaking will not be attended with profit; and that the principal subscribers must look for reimbursement to the improvement of their lands and manufactures; could it be consistent with the duty of Parliament to refuse their sanction to an undertaking, by which individuals proposed to increase the national stock at their own hazard and expence? In my judgment, the greatest failure of expected advantage to the subscribers leads to no evil. A large sum is expended in giving bread to the labourer, which might otherwise be wasted in useless luxury; and a work certainly of some utility, is obtained to the public.

Supposed injuries to private property form the single rational ground of objection to these undertakings; the public utility of which cannot be denied.

An apprehended injury to mill property, has been stated. On the river Arrow, where there are twenty-two mills, the proprietors and occupiers concur in approving the plan. On the river Rea, the great owners, and most of the occupiers of mills, approve; and even the few who have been prevailed on to petition, admit, that proper reservoirs would more than compensate any possible injury.

That

That no possible injury to mills can arise, a bare inspection of the intended act will demonstrate. Precautions never before taken, have been employed to prevent all cavils: Every stream is to be conducted by culvers under the canal; and as the canal will pass 14 feet above the level of the rivers on which these mills are situate, and not a drop of water is to be taken from these rivers, it is difficult for imagination to conceive a possible injury to the mills.

The subscribers, however, are not content to inflict no possible injury, but are desirous of conferring a positive benefit. They propose to erect large reservoirs of water, which shall be retained under the entire dominion of the owners and occupiers of mills; for each river. To explain the extent of the benefit intended, it will be necessary to say a few words on the nature of this property. The value of a mill depends on the quantity of water, and its height; or, in other words, on the power of the stream: but as this power is different at different seasons, every mill, to make the *greatest advantage*, must be adapted to the *ordinary force of the stream*; and consequently the excess of water in wet seasons is wasted. Suppose the ordinary supply of any stream to be as ten; in winter and wet seasons, fifteen; and in dry times, five. It is obvious that a mill on this stream, in dry seasons, will have only

B half

half the quantity of water it requires, and consequently can work only half the day ; while in winter and wet seasons, one third of the water must run to waste : To correct this inequality is the object of a reservoir. If all the water that runs to waste could be preserved until it is wanted, the improved value of the mill would be very great indeed. To the extent in which this is effected, the value of the mill is increased \*.

An apprehension was entertained that the tendency of facilitating the communication with the Severn, would be, to raise the price of coals at Birmingham.

The supply of coals in this part of the island is inexhaustible. The estates which have been already surveyed by skilful persons, and their actual produce ascertained, will yield a supply, from sources hitherto unopened, of 600,000 tons of coals per annum, for many centuries : and other estates, which have been less correctly examined, but of which the produce is stated far beneath what may with certainty be obtained, will extend this supply from sources unopened for some thousand years—a term beyond which the warmest patriot will scarcely pretend a care. No  
man,

\* Should it be asked, why are the proposers of this plan so very generous ? It is answered, the *more a mill can work*, the greater will be the tonnage arising from the trade passing to and from it.



man, the most sanguine, apprehends the demand can exceed 600,000 tons per annum: but whatever may be the increased demand, the obvious tendency must be to introduce a competition by tempting other proprietors of lands to open new coal pits (always expensive on the commencement) and thereby secure to Birmingham a constant regular supply at a low price. Indeed, this tendency of the measure is so obvious, that the owners of coal pits, not of the first quality, have taken an alarm, and apprehend a prejudice to their peculiar interest by lessening the demand for inferior coal, when new pits of a better quality shall be opened.

It has been said, that the proprietors of the Staffordshire canal being in possession of a navigation, ought to be protected by parliament.

Where encouragement has been given to individuals to expend their property in an undertaking useful to the public, perhaps parliament ought to prevent the just expectations of the adventurers being defeated by a new undertaking similar in its nature, and which can produce no new beneficial effects to the public; but this power of restraint is a trust of great delicacy, and ought to be very sparingly exerted. What would become of the communication by roads in every part of the kingdom, if objections of this sort were listened to without extreme caution?

All reasoning of this nature, as applied to the present subject, is however contemptibly ridiculous.

What are the *just expectations* of adventurers in public works? a reasonable profit and moderate compensation for their risk. All beyond is abuse, founded in a spirit of monopoly, and in truth is an unreasonable *exaction* from the public, which *competition* is the proper means of correcting. When therefore it is stated, that the proprietors of the Staffordshire canal now do, and for a course of years have divided more than twenty per cent. per annum, on their expenditure; all objections on their part, become ridiculous. Have not their *just expectations* been fulfilled? Have they not already received their capital with most exorbitant profits? And will they not receive another capital before this new undertaking can be compleated, or the proposed canal be navigated? If these profits are not sufficient, will they state the extent of *their just expectations*, that the public may judge of the moderation of their claim?

The public perhaps may be surprised to learn that the communication with Birmingham never was within the original project of the Staffordshire adventurers. Their petition to parliament, and the preamble to their bill state the communication with the grand trunk canal, and through that with Hull and  
Liver-

Liverpool to be their object ; and there is no power or authority given them which could enable them to construct a passage from their canal to Birmingham ; nor was the carriage of coal ever in their contemplation.—Their profit from this article and the carriage of goods from Birmingham, was purely accidental, and arose from the undertaking of other adventurers at a *subsequent* period opening a communication from Birmingham to the coal pits, and continuing that communication to the Staffordshire canal. These adventurers who conferred this benefit on them, are willing with the same liberality to promote the present undertaking ; but here the *modest* adventurers from *Staffordshire* interpose, and desire parliament to give their sanction to this language, “ Your undertaking has incidentally given us a profit from your  
 “ expenditure, and we now desire a monopoly of  
 “ these benefits, and that you may not be permitted  
 “ to employ other carriers than ourselves.”

If the Birmingham and Worcester canal should take place, the owners of the Staffordshire canal will retain all that was comprehended in their original scheme, together with so much of their incidental advantages as the superior accommodation of the public shall not withdraw to a more eligible conveyance.

It



It is fit now before we close the subject, to say a few words on the defects of the present communication, and of the claims of the county of Worcester, and of the public.

A principal defect of the present conveyance arises from the shoals in the river Severn above Worcester, an evil incurable. The fall from Stourport to Diglis, near Worcester, is nineteen feet; and the river is, what this fact alone would prove, full of shoals. These shoals impede the current of the stream, and retain the water longer in the bed of the river. Let these shoals be removed, the water will pass off, and the *whole* of the river become too shallow for navigation. Locks on the river could alone correct this defect; but these would overflow the meadows, impede the drainage of the lands, and do an injury to the land owners, which parliament never can sanction.

This defect gives rise to others,—to *uncertainty as to the time of the conveyance*—for it is only at particular periods that there is water sufficient for the navigation;—to *delays from a want of men, and expence from the increased number* which the strong current requires. It gives rise likewise to a double transshipping of commodities sent from Birmingham down the Severn first from the canal at Stourport—and secondly at or near  
Wor-

Worcester, as the barges which this shoal water will admit are too small to navigate much below.

The delays and damage incidental to such a navigation have induced the manufacturers of Birmingham to employ land carriage at a great expence—many waggons are constantly employed at the heavy charge of 4l. per ton from Birmingham to Bristol alone, to convey goods or manufactures which cannot await the delay or damage to which in the present navigation they are necessarily exposed;—large quantities of manufactures and the materials of manufacture are likewise sent to Diglis to be conveyed by the Severn in vessels that cannot navigate higher up the river.

To enumerate the benefits of a more perfect navigation from Birmingham to Worcester, were idle; when the numerous petitions which were presented in favour of the bill, from all the great cities and towns on the Severn and adjoining coast, speak more strongly than the testimony of a thousand witnesses, giving details of their calculations on expected advantage. No public interest opposes; no private property is injured; no *just expectations* of others defeated; and under these circumstances, if the land-owners and manufacturers of Worcestershire were alone to claim the public protection, in an attempt to procure  
water-

water-carriage to meliorate their lands by the conveyance of lime and manure, and to aid the labour of the husbandman and manufacturer by a cheaper supply of coals; this claim could not in justice be rejected. But when the more extensive, though not more just claims of the inhabitants of Worcester and other cities and towns, where the price of this necessary article coal has been occasionally doubled through the defects of the present navigation, are considered, it may be fairly presumed, that upon principles of public duty, this parliament will not withhold its assent to the present application.—What the opponents of the bill thought of the merits of the question, was evident from their conduct: After the house of commons had appointed a day to hear the evidence, they would not suffer it to come on, but by surprize carried an adjournment; which, for one session at least, defeated the Bill.

PUBLICOLA.

6 FE60



# WORCESTER and BIRMINGHAM CANAL.

·SAVING to the PUBLIC, by the INTENDED BIRMINGHAM and WORCESTER CANAL.

Miles saved.

£. s. d.  
0 7 4½

Upon Goods from Bristol to Birmingham, per Ton - - - - -  
*And, as the Way will be constant and certain, few Goods*  
*will go by Land-Carriage, between Birmingham and Wor-*  
*cester, which will be a Saving between Land and Water*  
*Carriage, in that Distance only, per Ton - - - - -*  
*—And less per Ton, than by Land-Carriage from Birming-*  
*ham to Bristol - - - - -*

0 13 0

3 11 6

Best-Tipton Coals will be cheaper, per Ton, at Wor-  
 cester, than by the present Conveyance - - - - -

0 3 3

And inferior Coals from other Mines cheaper in Proportion.

29 { Upon Goods from Bristol to Coventry, by the Way of Bir-  
 { ham and Fazely, per Ton - - - - -

0 8 11½

15 From Bristol to Burton, Gainborough and Hull by Birmingham 0 4 4½

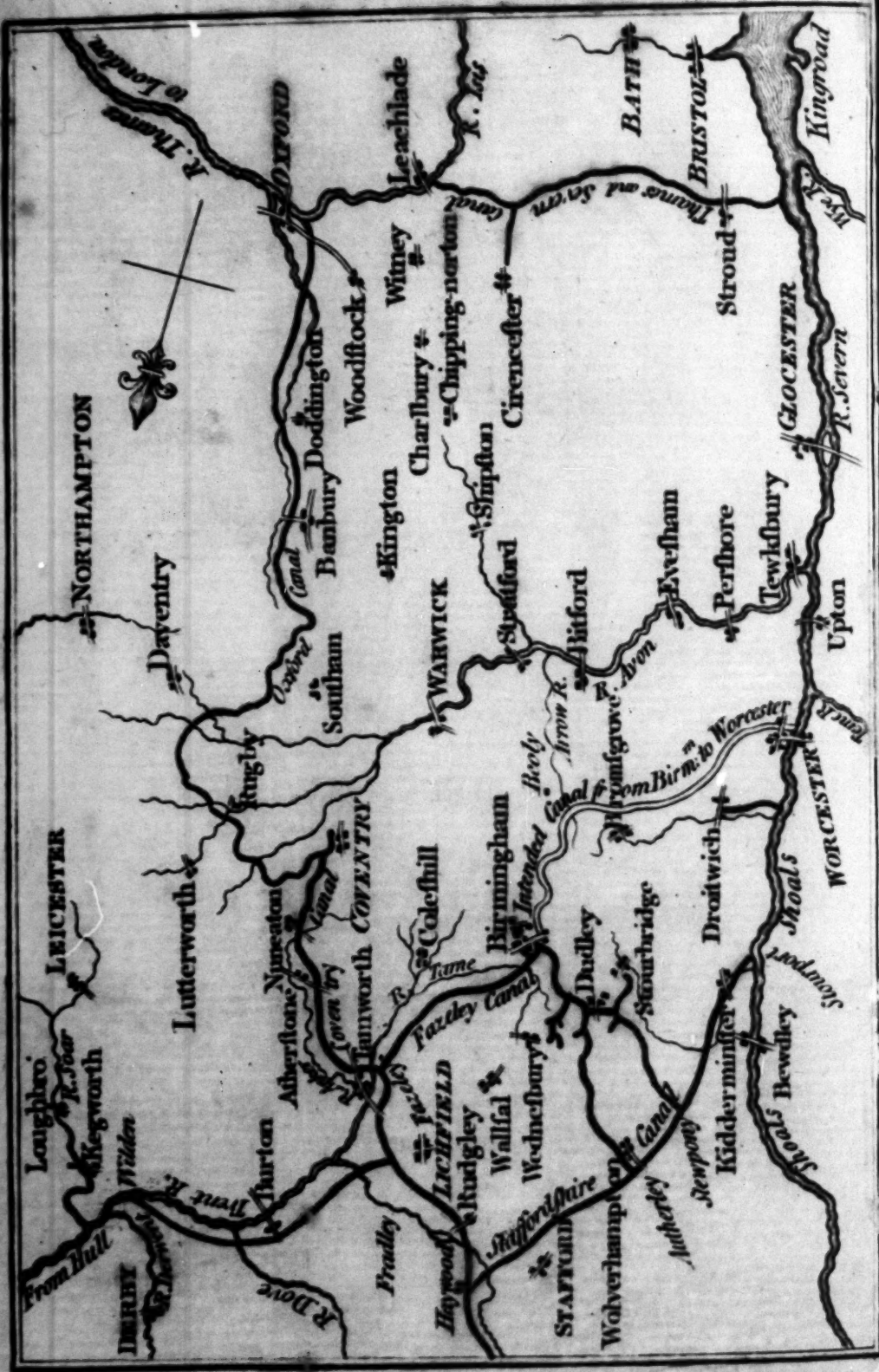
And the Course of the intended Canal, is by no Means parallel with any other Canal,  
 through the whole Length of the Line.

NOTE. The Saving to the Public, in Coals and Merchandize, by the intended Canal will  
 be at least *Fifty Thousand Pounds per Annum.*

6 FE60

6 FE60







# COMPARATIVE DISTANCE

WORCESTER, by Way of AUTHERLEY,

	Distance M. Fur.	Price per Ton.
AUTHERLEY.		l. s. d.
By Stourport, which is the <i>only</i> <i>Way</i> from Birmingham to Wor- cester, by Water	60 7	0 12 6
DUDLEY,		
Which the Opposers of the Bill call the <i>present Way</i> , although very far from being completed, and perhaps never may be, so as to render it a tolerable Passage	46 5	0 11 8

N. B. The Merchandize to Bristol, without  
Vessel, which will deliver Goods in Bristol,  
Sixpence per Ton, and nearly as soon as  
*Pounds* per Ton: And Coals, through the  
cheaper than at present.



CE 3 from BIRMINGHAM to DIGLIS, near  
LEY, DUDLEY, and the INTENDED CANAL.

# INTENDED CANAL.

From Birmingham, through a  
Country supplied with Coal by  
Land-carriage only, to which no  
Canal has at present any Access,  
and with the Approbation of  
Three-fourths of the Land-  
Owners, and almost all the Mill  
Owners, to Diglis, by a Barge  
Navigation for Vessels of 60  
Tons Burthen

Distance  
M. Fur.

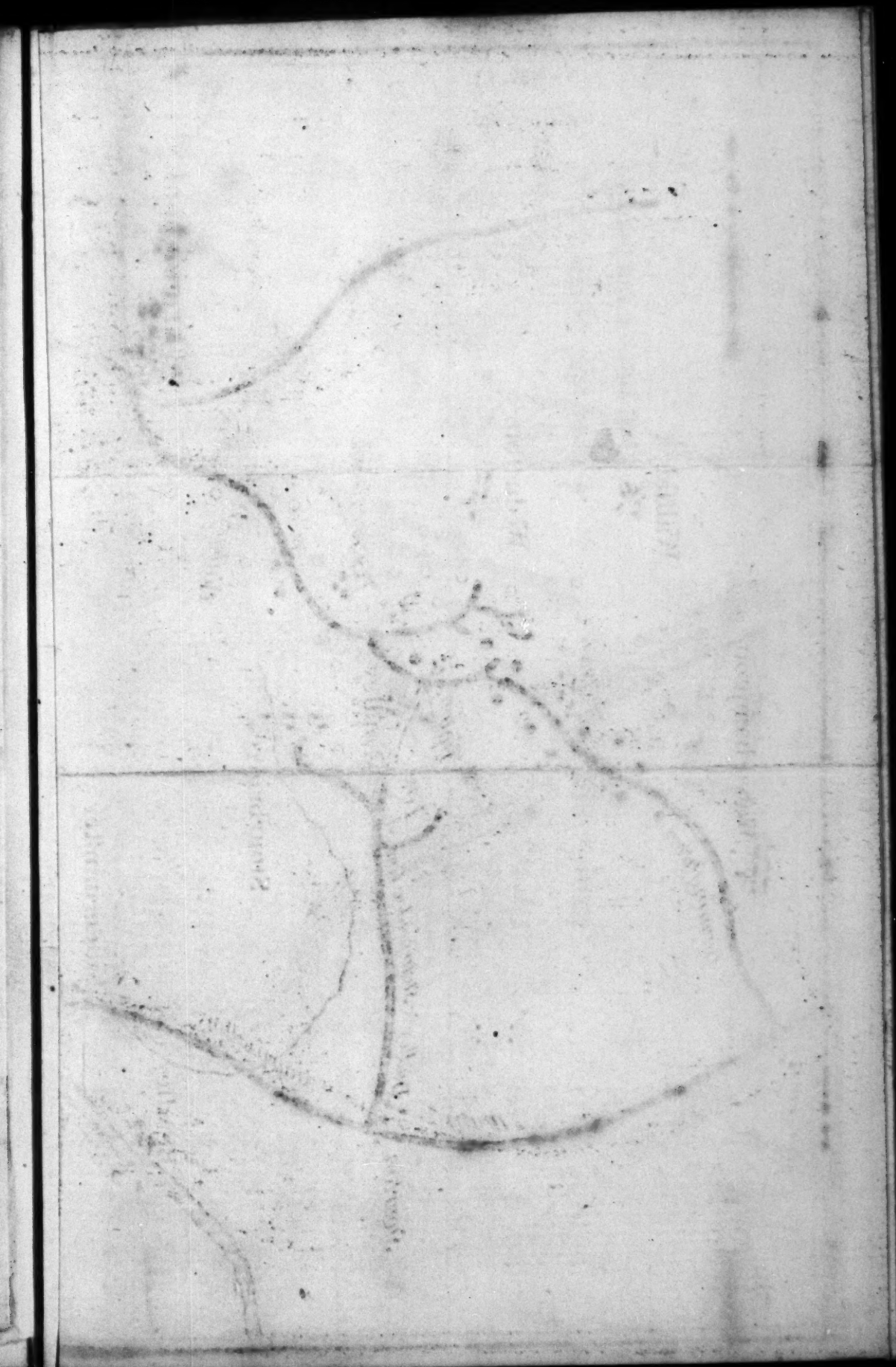
Price per  
Ton.

l. s. d.

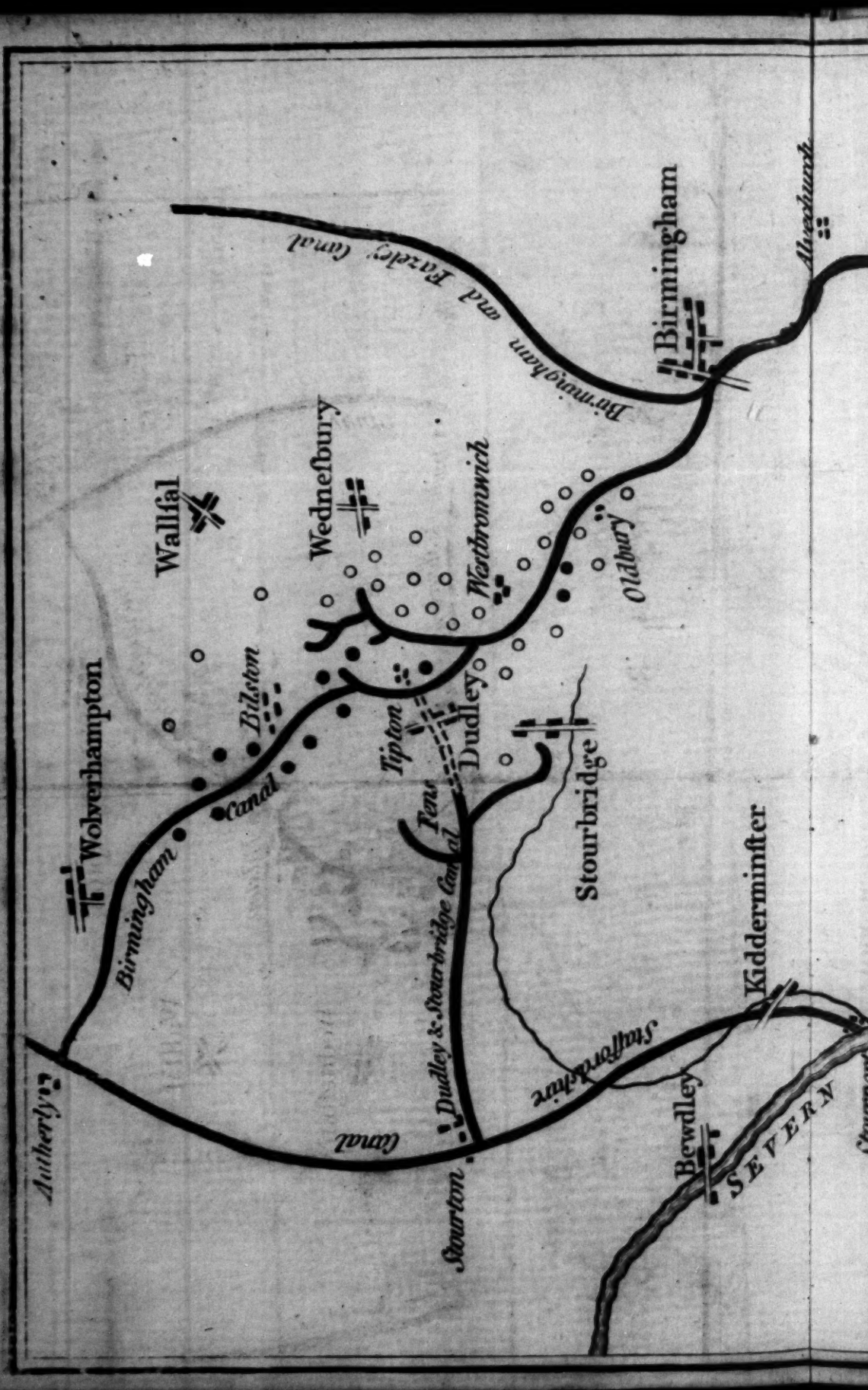
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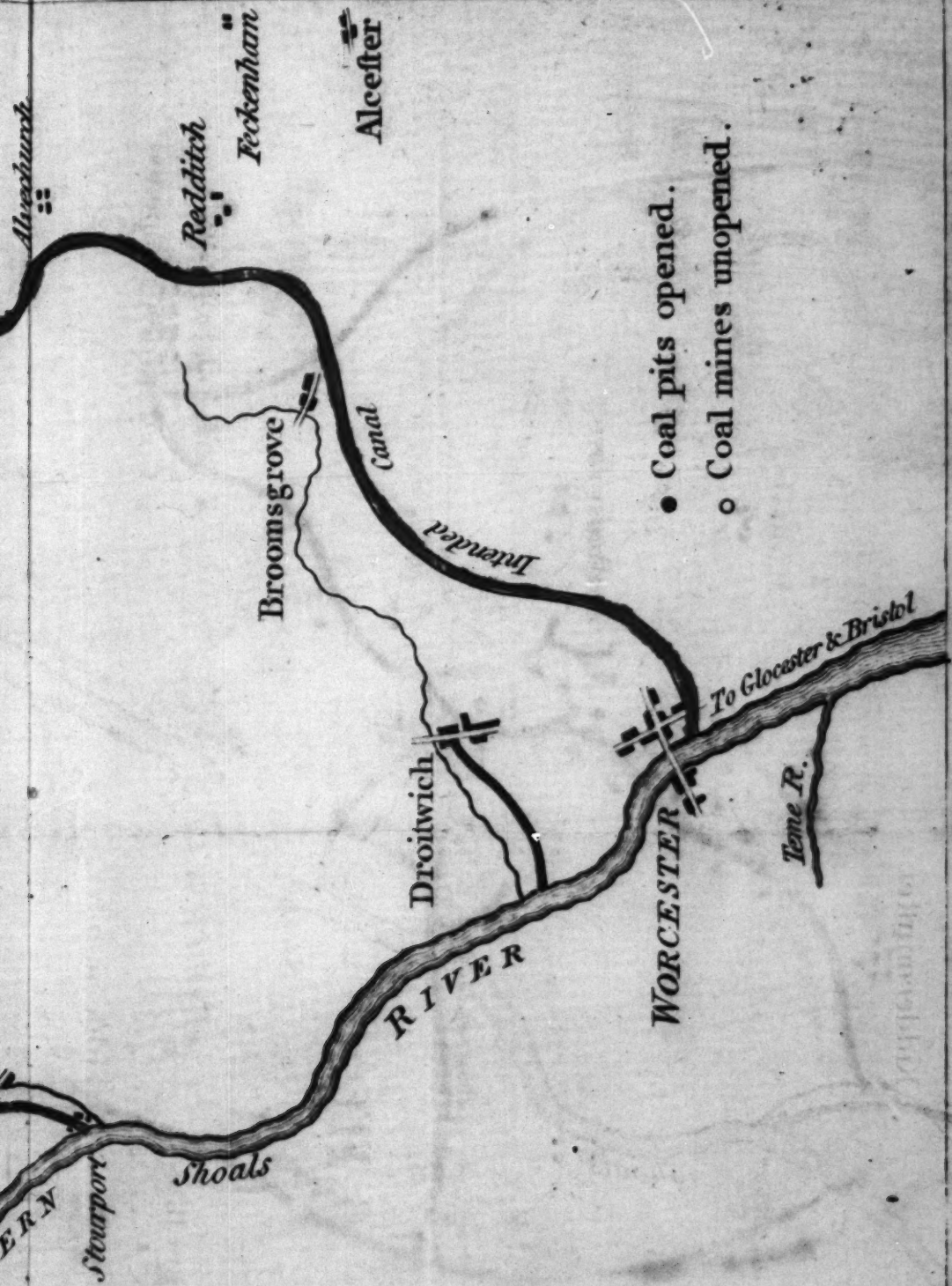
hout unloading, may be conveyed in the same  
ristol, or Birmingham, for Eight Shillings and  
oon as by Land Carriages, which costs *Four*  
h the Line of the Canal, nearly One Third











- Coal pits opened.
- Coal mines unopened.

6 FE60



